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## Subsidiary Body for Scientific and Technological Advice

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Item 11(a) of the provisional agenda

Methodological issues under the Kyoto Protocol

Land use, land-use change and forestry under Article 3,  
paragraphs 3 and 4, of the Kyoto Protocol and under  
the clean development mechanism

**In-session workshop to identify the types of revegetation activities potentially eligible as project activities under the clean development mechanism under the existing modalities and procedures, and to identify the cases where new modalities and procedures for revegetation would need to be developed, in order to guarantee the environmental integrity of the clean development mechanism**

**Report by the secretariat**

### *Summary*

An in-session workshop was held on 17 May 2016, in conjunction with the forty-fourth session of the Subsidiary Body for Scientific and Technological Advice, to identify the types of revegetation activities potentially eligible as project activities under the clean development mechanism (CDM) under the existing modalities and procedures contained in decisions 5/CMP.1 and 6/CMP.1, and to identify the cases where new modalities and procedures for revegetation would need to be developed in order to guarantee the environmental integrity of the CDM.

The participants of the workshop shared their experiences in implementing different types of revegetation activities and exchanged their views on the potential of revegetation activities for contributing to climate change mitigation and sustainable development. They agreed that revegetation activities aimed at establishing woody perennial vegetation could be made eligible as project activities under the CDM under the existing modalities and procedures, while the eligibility of other types of revegetation activities may require further work in order to guarantee the environmental integrity of the CDM.

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## I. Introduction

### A. Mandate and background

1. The Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP), at its seventh session, requested the Subsidiary Body for Scientific and Technological Advice (SBSTA) to initiate a work programme to consider and, as appropriate, develop and recommend modalities and procedures for possible additional land use, land-use change and forestry (LULUCF) activities under the clean development mechanism (CDM).<sup>1</sup>

2. Upon recommendation of SBSTA 41, the CMP requested the Executive Board of the CDM, in the context of the work programme referred to in paragraph 1 above, to assess the applicability of the modalities and procedures contained in decisions 5/CMP.1 and 6/CMP.1 to project activities involving revegetation, based on the definition of revegetation contained in decision 16/CMP.1, annex, paragraph 1(e), including revegetation in areas with agroforestry and silvopastoral practices where the established vegetation is not likely to reach the forest thresholds selected by the host Party under decision 5/CMP.1, annex, paragraph 8, in the event that such project activities would be eligible under the CDM.<sup>2</sup>

3. The Executive Board of the CDM reported to the CMP that, in its assessment, the modalities and procedures contained in decisions 5/CMP.1 and 6/CMP.1 are not applicable, *mutatis mutandis*, to project activities involving revegetation based on the definition of revegetation contained in decision 16/CMP.1, annex, paragraph 1(e). It also noted that without further guidance from the CMP on the type of revegetation activities and their parameters to be defined to guarantee the environmental integrity of the CDM, it was not possible to indicate whether new modalities and procedures would need to be developed and/or which existing or new sections of the modalities and procedures would need to be applied in the case of revegetation project activities.<sup>3</sup>

4. SBSTA 43 took note of the outcome of the assessment by the Executive Board of the CDM, and requested the secretariat to organize an in-session workshop at SBSTA 44 in order to identify the types of revegetation activities potentially eligible as CDM project activities under the existing CDM modalities and procedures and to identify the cases where new modalities and procedures for revegetation would need to be developed in order to guarantee the environmental integrity of the CDM.<sup>4</sup>

5. Following the request of SBSTA 43, the secretariat organized an in-session workshop during SBSTA 44, on 17 May 2016. At the same session, the SBSTA requested the secretariat to prepare a report on the workshop for consideration at SBSTA 45.<sup>5</sup>

### B. Scope of the note

6. This note by the secretariat contains a report on the in-session workshop referred to in paragraph 5 above. The report includes an overview of the proceedings of the workshop (chapter II), a summary of the panel discussion held during the workshop (chapter III) and a

<sup>1</sup> Decision 2/CMP.7, paragraph 6.

<sup>2</sup> Decision 7/CMP.10, paragraphs 1–3.

<sup>3</sup> FCCC/KP/CMP/2015/5, paragraphs 121–123.

<sup>4</sup> FCCC/SBSTA/2015/5, paragraphs 56 and 57.

<sup>5</sup> FCCC/SBSTA/2016/2, paragraph 79.



summary of the plenary discussion that took place at the conclusion of the workshop (chapter IV).

### **C. Possible action by the Subsidiary Body for Scientific and Technological Advice**

7. The SBSTA may wish to consider the information contained in this report as part of its consideration of possible additional LULUCF activities under the CDM pursuant to the CMP request referred to in paragraph 1 above.

## **II. Proceedings of the workshop**

8. The workshop was organized by the secretariat, and was open to all Parties and admitted observer organizations attending SBSTA 44.

9. Mr. Carlos Fuller (Belize), the Chair of the SBSTA, delivered the opening remarks and introduced the mandate and objectives of the workshop. He requested that Ms. Maya Hunt (New Zealand) and Mr. José Antonio Prado (Chile) co-facilitate the workshop.

10. On behalf of the two co-facilitators, Ms. Hunt provided a brief introduction of the workshop and posed the following questions for consideration by the participants, in order to guide the discussions during the workshop:

(a) What experience does your country have in the implementation of different types of revegetation activities?

(b) What types of other revegetation activities would be appropriate under your national circumstances if support for such activities were available?

(c) What types of plants, including trees and shrubs, and management activities, including cultivation methods, could be employed in the revegetation activities in your country that might be potentially eligible as project activities under the existing CDM modalities and procedures?

11. The workshop was organized in two parts: the first part consisted of a panel discussion structured around the three questions listed in paragraph 10 above, and the second part gave the participants an opportunity for a general exchange of views, building on the panel discussion and focused around the three questions.

12. Further information on the workshop, including the agenda, an information note, and presentations and statements by the panellists, is available on the UNFCCC website.<sup>6</sup>

## **III. Summary of the panel discussion**

13. In the panel discussion, the representatives of Chile, Colombia, Indonesia and Malawi, who had agreed to be the panellists, made statements through which they shared their experiences relating to revegetation activities in their countries, particularly in the context of the identification of the types of revegetation activities potentially eligible as CDM project activities under the existing CDM modalities and procedures. The panellists also presented their views on the types of revegetation activities for which new modalities and procedures would need to be developed in order to guarantee the environmental integrity of the CDM.

<sup>6</sup> <<http://unfccc.int/9460.php>>.



14. The representative of Malawi, starting the statements by the panellists, said that revegetation activities can make an important contribution to achieving the sustainable development goals in Africa. Revegetation activities, such as the revegetation of catchments and agroforestry practices, contribute to the conservation and protection of water resources, while promoting sustainable crop and livestock production. Revegetation activities aimed at checking soil erosion and combating desertification, and tree planting activities aimed at mitigating air pollution in urban areas, can contribute to the conservation of natural resources, reduction of deforestation and improvement of ecosystem sustainability. Revegetation activities also contribute to food security and livelihood resilience, create employment opportunities and improve the availability of wood and non-wood products for rural communities. He also noted that, by increasing the availability of fuelwood and water, revegetation activities can help to reduce the burden of work for women and children, who have to spend an increasing amount of time collecting fuelwood and fetching water in rural communities of Africa.

15. Among the types of revegetation activities in Africa that could be potentially made eligible under the CDM, the representative of Malawi cited activities such as the community-based natural regeneration of woodlands, regeneration of depleted forest areas, degraded grasslands and other degraded lands, and creation of windbreaks and shelterbelts. Through the application of appropriate techniques of soil and water conservation and through technical and institutional capacity-building, revegetation activities could be undertaken across a wide range of farming systems and ecological zones. The integration of revegetation activities in the national agricultural development plan and in the environmental protection plans in different eco-regions, including in arid and semi-arid zones, can be an important strategy for promoting sustainable natural resource management.

16. The representative of Chile stated that his country has a long experience in implementing revegetation activities. He said that an area of 25,000 ha had been revegetated during the early 1960s, which provided fodder for the goats and sheep belonging to local communities. Chilean Law 701 (of 1974) supported afforestation and revegetation activities covering the period 1974–2010. During this time, 2,000,000 ha of planted forest was created, mainly comprising exotic species, and 150,000 ha was revegetated, comprising native and exotic species. Considering that 40 per cent of the geographical area of the country suffers from arid and semi-arid conditions, checking the degradation of lands and combating desertification is of strategic importance to Chile. For this reason, Chile has developed a national strategy for climate change and vegetation resources, and has envisaged an important role for LULUCF activities in its intended nationally determined contribution under the Paris Agreement.

17. The representative of Chile underscored the need for enhanced support for revegetation activities to combat desertification and to deliver important social and economic benefits to the local communities. In this context, he noted that while the national plan provides for the recovery of 100,000 ha of degraded land through revegetation activities by 2030, an additional 2,000,000 ha of degraded land could potentially be recovered if enhanced support for revegetation activities were to be made available.

18. The representative of Colombia informed participants that, in his country, agroforestry systems and silvopastoral systems, where trees are planted on croplands or pastures, particularly in coffee and cattle-ranching areas, are major types of revegetation activities. These activities provide shade, reduce insolation and mitigate high temperatures at the crop and ground level, while improving water retention in the soil, preventing soil erosion and improving ecosystem services such as biodiversity conservation. He cited quantitative evidence of potential economic benefits that could be gained from such



activities if upfront capital financing were made available to farmers to enable transition to these systems.

19. The representative of Colombia proposed that defining a subclass of revegetation activities could be a possible approach for identifying revegetation activities that could be made eligible under the CDM through the application of existing modalities and procedures for afforestation and reforestation (A/R) project activities. For this purpose, he proposed that revegetation activities that aim to establish vegetation with threshold values of tree height and tree crown density falling between the forest threshold values selected by the host country and the minimum forest thresholds values allowed under decision 5/CMP.1 could be made eligible under the existing modalities and procedures for A/R project activities.

20. The representative of Indonesia said that her country had experience in a variety of revegetation activities but that bringing these activities under the CDM would face the constraint of monitoring, as it would be difficult, in Indonesia, to distinguish the lands deforested on 31 December 1989 from those that were deforested later. She emphasized the importance of high-density agroforestry as a key activity in her country but in her view this activity would qualify as an A/R activity because the tree crown cover in high-density agroforestry could well exceed 30 per cent, which is the forest threshold value selected by Indonesia.

21. On the other hand, she said, the activities aimed at protective functions would be classified as revegetation in Indonesia. Such activities could include revegetation for the reclamation of mining areas, rehabilitation of watersheds and protection of water resources, revegetation of karst areas, restoration of conservation areas such as wildlife habitats, and restoration of community forest areas. In these revegetation activities, the use of local species is preferred over exotic species so that the ecosystem does not get disturbed.

22. In the question-and-answer time that followed the statements by the panellists, some participants sought clarification on the proposal by the representative of Colombia to delineate the type of revegetation activities to which the existing A/R modalities and procedures would apply. They noted that given that every country that is a Party to the Kyoto Protocol is allowed to choose the vegetation thresholds for defining forest for the purpose of the CDM, countries that have selected one or more of the lowest threshold values allowed for defining forest under decision 5/CMP.1 will have no possibility to implement revegetation activities under the CDM.

23. In response to this, the representative of Colombia said that while he acknowledged the constraint imposed by the proposed delineation of revegetation activities, inclusion of the revegetation activities with vegetation thresholds lower than the minimum threshold values allowed for defining forest under decision 5/CMP.1 would require further work and, in his view, the time for undertaking such work was not available.

24. Some participants expressed the view that revegetation activities with vegetation thresholds lower than the minimum threshold values allowed for defining forest under decision 5/CMP.1 can include important activities such as the establishment of vegetation cover in grasslands and mining areas by promoting the regeneration of perennial grasses and native shrubs. They saw no essential difference between these activities and revegetation activities promoting the establishment of trees, as long as the activities result in perennial vegetation that would stay on site for long periods of time.

25. One participant expressed the view that the CDM, in the light of the Paris Agreement, will come to an end with the second commitment period of the Kyoto Protocol. Although he would like to see this agenda item closed, he also agreed that there was value in technical discussions, as these could feed into future work under the Paris Agreement. He emphasized the importance of the land eligibility criterion for revegetation activities,



and wanted to know the views of the panellists on the issue of land eligibility in the case of possible inclusion of revegetation activities under the CDM. He also asked if the panellists saw any connection between revegetation activities and REDD-plus<sup>7</sup> activities.

26. Responding to these observations, the representative of Indonesia said that in her view, it was very difficult to monitor whether a particular parcel of land was deforested on 31 December 1989 or later. This CDM requirement was therefore complicated to meet in her country. She further said that she saw some connectivity between revegetation activities and REDD-plus activities. The representative of Chile said the revegetation activities implemented in his country as domestic activities had no land eligibility criterion attached. However, he was aware that if Chile wanted to earn CDM credits for revegetation activities, the issue of land eligibility would arise, which would add complexity, but such complexity could be resolved. The representative of Colombia said that retaining the same land eligibility criterion as in the case of A/R activities would be acceptable and that the implementation of revegetation activities would indirectly support REDD-plus activities by reducing pressure on forests.

## IV. Summary of the plenary discussion

27. In the second part of the workshop, the co-facilitator, Mr. Prado, invited all the participants to share their views relating to the aspects of revegetation activities framed by the three questions listed in paragraph 10 above.

### A. Countries' experiences in revegetation activities

28. All participants shared the view that revegetation activities have an important potential for contributing to climate change mitigation and sustainable development. As carbon sequestration activities contributing to climate change mitigation and sustainable development, revegetation activities complement A/R activities in the LULUCF sector.

29. The participants recognized the sustainable development co-benefits of revegetation activities, including: enhancing the productivity and sustainability of agricultural lands and other ecosystems; preventing soil erosion and desertification; recovering degraded land resources, protecting watersheds and conserving water resources; reducing deforestation and conserving forest resources and biodiversity; restoring natural habitats, improving the availability of wood and non-wood products; strengthening food security and livelihood resilience, mitigating air pollution and protecting health in urban areas; and promoting gender equity in rural areas.

30. The participants noted that countries had experience in the implementation of a variety of revegetation activities. Among such activities, the participants mentioned the community-based regeneration of woodlands, depleted forest areas and grasslands; agroforestry and silvopastoral practices; revegetation in areas prone to soil erosion; the revegetation of mining areas, karst areas, and degraded watersheds and catchments; revegetation in designated conservation areas such as wildlife habitats; urban tree planting activities, and the creation of windbreaks and shelterbelts.

31. Some participants emphasized the fact that although revegetation activities have a large potential, implementing revegetation activities requires intensive efforts and high

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<sup>7</sup> In decision 1/CP.16, paragraph 70, the Conference of the Parties encouraged developing country Parties to contribute to mitigation actions in the forest sector by undertaking the following activities: reducing emissions from deforestation; reducing emissions from forest degradation; conservation of forest carbon stocks; sustainable management of forests; and enhancement of forest carbon stocks.



investment, particularly in the cases where the activities aim at the ecological recovery of degraded lands. In this context, they noted the potential role of carbon incentive in enabling revegetation activities and promoting synergy between climate change mitigation and sustainable development.

## **B. Eligibility of revegetation activities under the clean development mechanism**

### **1. Types of revegetation activities**

32. The participants considered the different types of revegetation activities and the possibility of applying the existing A/R CDM modalities and procedures to revegetation activities.

33. Most participants felt that revegetation activities promoting the establishment of perennial woody vegetation can be implemented as CDM project activities by applying the existing A/R CDM modalities and procedures. They were of the view that revegetation activities promoting the establishment of only non-woody (herbaceous) vegetation would require further work in developing new modalities and procedures, and could therefore be considered in the future in the context of work under Article 6 of the Paris Agreement.

34. Some participants were of the view that although the distinction between revegetation activities using woody species and those using non-woody species was useful, it was not essential. Revegetation activities promoting the establishment of perennial grasses can, in their view, help to build up soil organic carbon, while being economically and ecologically valuable for recovering degraded grasslands, mining areas and other barren lands. In such activities, limiting to woody vegetation or trees was not required. Revegetation activities under the CDM should allow the conversion of degraded areas back to their natural state. Such restoration activities would not involve the harvesting or removal of the vegetation established on the land, and therefore the permanence of the net anthropogenic greenhouse gas removals resulting from such activities would be safeguarded against reversal, as long as the grasses established were perennial.

35. A few participants expressed concern about the possible use of invasive species in revegetation activities. They felt that revegetation activities promoting the regeneration of degraded ecosystems should promote the same indigenous species that existed in the area before the degradation occurred. Planting exotic species could change the ecosystem functions or the biodiversity of the area, which would not be a desirable outcome.

36. Other participants said that while they recognized the concerns about the use of exotic species, the aspects of CDM projects relating to their contribution to sustainable development and their environmental impacts, such as the effect of invasive species on the ecosystems, are already recognized and addressed in the A/R CDM modalities and procedures. A *mutatis mutandis* application of these modalities and procedures to revegetation activities will address these concerns.

### **2. Land eligibility for revegetation activities**

37. For the purpose of land eligibility, most participants supported the view that land eligibility for revegetation activities should be the same as for A/R CDM project activities. Although this might limit the scope of lands that could be eligible for revegetation activities, this will maintain a common approach and facilitate the use of common modalities and procedures.

38. A few participants were of the view that the modalities and procedures for A/R CDM project activities are too restrictive. They said it was difficult to monitor which areas



were deforested on 31 December 1989 and which areas were deforested after this date. They were therefore looking forward to a more practical set of rules in a future mechanism that would facilitate both A/R and revegetation activities.

### **C. Way forward**

39. The workshop participants, while recognizing the importance of revegetation activities in terms of their potential contribution to climate change mitigation and sustainable development, agreed that the way forward to make revegetation activities eligible under the CDM could possibly include the following considerations:

(a) Revegetation activities that promote the establishment of perennial woody vegetation could be made eligible under the existing A/R CDM modalities and procedures;

(b) The same land eligibility criterion could be applied to revegetation activities as is applied in A/R CDM project activities;

(c) Revegetation activities that promote the establishment of non-perennial (herbaceous) vegetation only, as well as broader land eligibility criteria for LULUCF activities, could be considered in the context of future work for the SBSTA.

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The first part of the paper is devoted to a review of the literature on the topic. The second part is devoted to a description of the methodology used in the study. The third part is devoted to a presentation of the results of the study. The fourth part is devoted to a discussion of the results and their implications. The fifth part is devoted to a conclusion.

## 2. Methodology

The study was conducted using a mixed-methods approach. The quantitative part of the study involved a survey of 100 participants. The qualitative part of the study involved interviews with 10 participants. The data from the survey and the interviews were analyzed using statistical methods and content analysis, respectively.

The survey was conducted using a self-administered questionnaire. The questionnaire consisted of 100 items. The items were divided into five sections. The first section contained 20 items related to the demographic characteristics of the participants. The second section contained 20 items related to the participants' attitudes towards the topic. The third section contained 20 items related to the participants' behaviors. The fourth section contained 20 items related to the participants' beliefs. The fifth section contained 20 items related to the participants' emotions.

The interviews were conducted using a semi-structured format. The interview schedule consisted of 10 topics. The topics were related to the participants' experiences, perceptions, and beliefs. The interviews were conducted in a face-to-face format. The duration of the interviews ranged from 30 to 60 minutes. The data from the interviews were analyzed using content analysis. The content analysis was conducted using a list of 10 codes. The codes were related to the 10 topics in the interview schedule.

The data from the survey and the interviews were analyzed using statistical methods and content analysis, respectively. The statistical methods used in the analysis were descriptive statistics, inferential statistics, and correlation analysis. The content analysis was conducted using a list of 10 codes. The codes were related to the 10 topics in the interview schedule. The results of the analysis are presented in the next section.

## 3. Results

The results of the study are presented in this section. The first part of the section presents the results of the survey. The second part of the section presents the results of the interviews. The third part of the section presents the results of the correlation analysis.

The results of the survey are presented in Table 1. The results of the interviews are presented in Table 2. The results of the correlation analysis are presented in Table 3.